

## PATENT ABSTRACTS OF JAPAN

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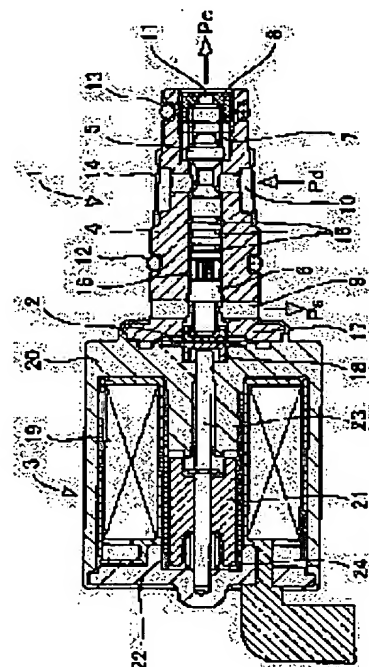
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## (54) CONTROL VALVE FOR VARIABLE DISPLACEMENT COMPRESSOR

## (57)Abstract:

PROBLEM TO BE SOLVED: To provide a control valve for a variable displacement compressor having smaller size, power saving ability and improved heat radiating performance.

SOLUTION: A solenoid 3, a diaphragm 2 and a valve body 1 having a valve element 5 are arranged in sequence. Ports connected to the variable displacement compressor are located in the order of a port 9 communicated with a suction chamber for receiving a suction pressure  $P_s$ , a port 10 communicated with a discharge chamber for introducing a discharge pressure  $P_d$  and a port 11 communicated with a crank room to guide a pressure  $P_c$  in the crank room to the outside, in a view from the side of the solenoid 3. With the discharge pressure  $P_d$  introduced between the valve element 5 and a shaft 6 integrally molded, the valve element 5 is not affected by the discharge pressure  $P_d$ , achieving the smaller size and power saving ability of a spring 24 for the solenoid 3 for controlling the valve element 5 and an electromagnetic coil 19. The heat radiating performance is improved by the arrangement of the low-temperature port 9 for the suction pressure  $P_s$  in proximity to the solenoid 3.



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